

# PATENT ABSTRACTS OF JAPAN

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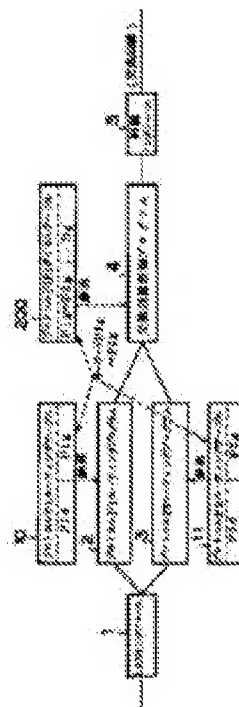
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## (54) **METHOD AND DEVICE FOR CONNECTING DIGITAL COMMUNICATION NETWORK**

(57)Abstract:

PURPOSE: To form a method and device for connecting a network which easily and surely sets the relay destination dial number of each protocol when multi-protocol routing is performed.

CONSTITUTION: It is judged whether a packet received from a LAN interface 1 is the one of protocol P1 or P2, and when it is the packet of protocol P1, a relay destination address P1g is retrieved by making access a protocol routing table 10 by using the destination address P1d of protocol P1 by a routing processing part 2. When the packet is the one of protocol P2, a relay destination address P2g is retrieved similarly. The relay destination addresses P1g and P2g are set in the same numeric values. A control part 4 makes access a common protocol dial table 200 by using the addresses P1g, P2g without being conscious of the protocols P1, P2, and retrieves a corresponding relay destination dial Dg.



## DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Industrial Application]Especially this invention relates to the method and device which perform multi-protocol routing about the Digital Communications Division network connection method and a contact.

[0002]

[Description of the Prior Art]An example of the contact between LAN (Local Area Network) of the former which uses the switched line by a dial number is shown in drawing 2. It is judged whether in a figure, there is any packet which received from the LAN interface 1 with the protocol P1, or it is the protocol P2, the case where it is the protocol P1 -- the protocol P1 -- the case where it is outputted to the routing processing part 2 in which the routing program of \*\* was stored, and is the protocol P2 -- the protocol P2 -- it is outputted to the routing processing part 3 in which the routing program of \*\* was stored. The protocol routing table 10 is accessed using destination address P1 d of the protocol P1, and relay destination address P1 g corresponding to P1 d is searched with the routing processing part 2. The protocol routing table 11 is accessed using destination address P2 d of the protocol P2, and relay destination address P2 g corresponding to P2 d is searched with the routing processing part 3. And it outputs to the control section 4 which added these relay destination address P1 g and P2 g to the packet, respectively and in which the switched line control program was stored. The protocol P1 and P2 are identified, and in being the protocol P1, the protocol dial table 100 is accessed and it searches the relay destination dial Dg corresponding to the relay destination address P1 g with the control section 4. In being the protocol P2, the protocol dial table 101 is accessed and it searches the relay destination dial Dg corresponding to the relay destination address P2 g. Thus, after the relay destination dial Dg was set up for every protocol, It judges whether it is a relay destination and ending with connection, if it has not circuit connected, after performing connection processing, packet relay is performed via the line interface 5, and if it is line connection ending, packet relay will be promptly performed via the line interface 5.

[0003]

[Problem(s) to be Solved by the Invention]Thus, when performing multi-protocol routing, use a relay destination protocol as a keyword which associates the routing point and a relay destination dial, but. As a dial table of the protocol P1, the dial table of relay destination address P1 g and the relay destination dial number Dg, And it needed to have the dial table for every protocol as a dial table of the protocol P2 like the dial table of relay destination address P2 g and the relay destination dial number Dg.

[0004]However, the dial number of the same relay destination was the same, therefore although it is a multi-protocol, with the composition provided with a dial table for every protocol in this way, relay destination dial data overlapped, and while composition was complicated superfluously, there was a problem which also produces a dial number setting error.

[0005]This invention is made in view of SUBJECT which the above-mentioned conventional technology has, the purpose is faced performing multi-protocol routing, and it is in providing the Digital Communications Division network connection method and contact which can set up the relay destination dial number of each protocol simply and certainly.

[0006]

[Means for Solving the Problem]To achieve the above objects, a Digital Communications Division network connection method according to claim 1, In a Digital Communications Division network connection method of performing multi-protocol routing which used a switched line by a dial number, The routing point and a relay destination dial are associated using a relay destination protocol address, and said relay destination protocol address for every protocol is set up become the same numerical value.

[0007]To achieve the above objects the Digital Communications Division network connection apparatus according to claim 2, In the Digital Communications Division network connection apparatus which performs multi-protocol routing which used a switched line by a dial number, It has a dial table which is set up so that a relay destination protocol address for every protocol may serve as the same numerical value, and associates the routing point and a relay destination dial using said relay destination protocol address.

[0008]

[Function]Thus, in a method according to claim 1 thru/or the device according to claim 2, A relay destination protocol address is used as a keyword which associates the routing point and a relay destination dial, and the dial number of the routing point is set up like a routing point-relay destination protocol address relay destination dial. And although it is a multi-protocol, in view of the same thing, the dial number of the same relay destination does not depend this relay destination protocol address on a protocol, but sets it as the same numerical value. Thereby, when searching a relay destination dial from a relay destination protocol address, what is necessary is to search only the dial table which associates the evaluated relay destination protocol address and a relay destination dial therefore, and a dial table is not twisted to a protocol but can be shared.

[0009]

[Example]Hereafter, working example of this invention is described, using Drawings.

[0010]The configuration block figure of this example is shown in drawing 1. It is judged whether the packet which received from the LAN interface 1 is the protocol P1, or it is the protocol P2, the case where it is the protocol P1 -- the protocol P1 -- the case where it is outputted to the routing processing part 2 in which the routing program of \*\* was stored, and is the protocol P2 -- the protocol P2 -- it is outputted to the routing processing part 3 in which the routing program of \*\* was stored. The protocol routing table 10 is accessed using destination address P1 d of the protocol P1, and relay destination address P1 g corresponding to P1 d is searched with the routing processing part 2. The protocol routing table 11 is accessed using destination address P2 d of the protocol P2, and relay destination address P2 g corresponding to P2 d is searched with the routing processing part 3. However, at this example, these relay destination address P1g and P2 g are set up for the same numerical value (for example, 111). And it outputs to the control section 4 which added these relay destination address P1 g and P2 g (P1 g=P2 g= constant) to the packet, respectively and in which the switched line control program was stored. Without identifying the protocol P1 and P2, the single common protocol dial table 200 is accessed using

either P1 g or P2 g, and the relay destination dial Dg corresponding to the relay destination address P1 g or P2 g is searched with the control section 4. Thus, after the relay destination dial Dg is set up, it is judged whether it is a relay destination and ending with connection, If it has not circuit connected, after performing connection processing, packet relay is performed via the line interface 5, and if it is line connection ending, packet relay will be promptly performed via the line interface 5.

[0011]Thus, since relay destination address P1 g and P2 g are set as the value same as a numerical value in this example, While not having a dial table for every protocol like before and being able to attain sharing of a dial table, it becomes unnecessary to perform discernment of protocol P1 and P2 by the control section 4.

[0012]Although the case where the number of protocols was two was illustrated in this example, it is also the same as when performing routing of three or more kinds of protocols, and the effect of this example becomes large, so that the number of protocols increases.

[0013]

[Effect of the Invention]As explained above, according to a method according to claim 1 thru/or the device according to claim 2. By setting the relay destination protocol address for every protocol as the value same as a numerical value in multi-protocol routing, It becomes unnecessary to become possible to attain sharing of a dial table, to be able to decrease the dial number setting error for every protocol, and to identify a protocol further in the program which controls connection/cutting of a switched line, and control is simplified more.

## CLAIMS

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[Claim(s)]

[Claim 1]In a Digital Communications Division network connection method of performing multi-protocol routing which used a switched line by a dial number, A Digital Communications Division network connection method associating the routing point and a relay destination dial using a relay destination protocol address, and setting up said relay destination protocol address for every protocol become the same numerical value.

[Claim 2]In the Digital Communications Division network connection apparatus which performs multi-protocol routing which used a switched line by a dial number, The Digital Communications Division network connection apparatus having a dial table which is set up so that a relay destination protocol address for every protocol may serve as the same numerical value, and associates the routing point and a relay destination dial using said relay destination protocol address.

## DESCRIPTION OF DRAWINGS

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[Brief Description of the Drawings]

[Drawing 1] It is a configuration block figure of working example of this invention.

[Drawing 2] It is a configuration block figure of a device conventionally.

[Description of Notations]

1 LAN interface

2, 3 routing processing parts

4 Control section

5 Line interface

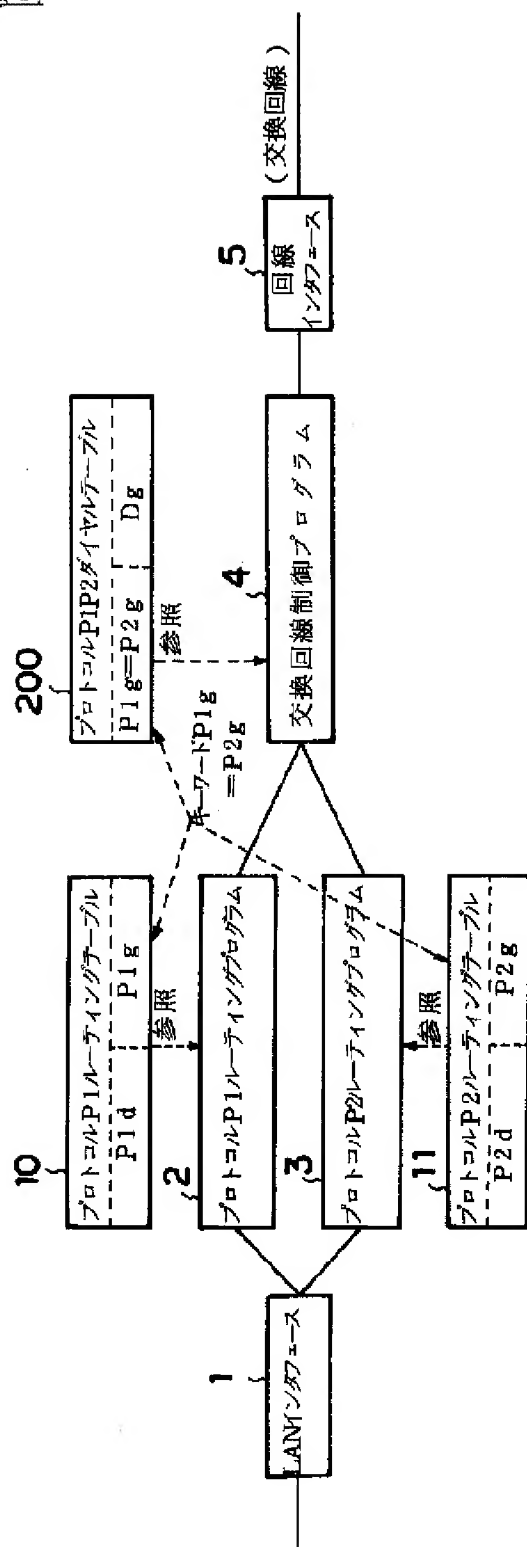
10 and 11 Routing table

200 Dial table

## **DRAWINGS**

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[Drawing 1]



[Drawing 2]

